Increasing Resilience in our Transportation Ecosystem: Insights from the First Wave of the Covid19 Pandemic

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Executive Summary

In the past decades new technologies and business models have disrupted the status quo of personal transportation: the rise of ridehailing giants across the globe such as Uber/Careem/99 changed the taxi industry forever. The growing segment of micromobility operators like Lime, Spin, Tier, Bird or Revel introduced a fun form factor zooming around cities. Shared electrified autonomous vehicles were the promised saviours for Vision Zero and our congestion woes.

And then the new mobility landscape turned topsy-turvy.

The dual shock of a global pandemic and what looks like to be a severe and prolonged economic crisis, halted rosy promises of a bright future for the shared mobility ecosystem.

Ridership and usage plummeted with public transit suffering the most. People have significantly reduced their amount of travel as the pandemic has accelerated telecommuting adoption by businesses and educational institutions. Further people have reduced the number of trips beyond commuting in an effort to reduce their exposure to the virus and to follow government guidelines and measures to curb the spread of the epidemic. In the absence of car traffic during the early days of the pandemic, street space was re-allocated and bike lanes and infrastructure for alfresco dining and micro mobility popped up both in Europe and North America. With health being on everyone’s mind, people are opting for more individual modes of transportation. Car and bike ownership are on the rise and so are subscription services and other forms of shared mobility.

This report pinpoints the most relevant changes in mobility behaviours and how the industry is addressing these changes. It also identifies clear policy recommendations that harness these changes in a way that will have a lasting and positive impact on our communities. The report is centered around four key consumer and industry trends, laid out in the table below.

### Overview of consumer and industry trends

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The cumulative effect of these trends is to show that now is the time to integrate shared mobility into the larger transportation ecosystem. These trends are matched by popular opinion, 86% of all adults “want the world to change significantly and become more sustainable and equitable rather than returning to how it was before the COVID-19”.¹

Three Policy Recommendations for any City

The top three policy recommendations that the Covid19 Shared Mobility Taskforce identified are:

01 Ensure shared mobility is seen as an Essential Service.
02 Create a policy framework that supports financially viable operations.
03 Invest in partnerships with shared mobility operators.

Our work captures the learnings and insights of 7 months of global research during the first wave of the pandemic. While we don’t expect the initial shock to industry and cities to repeat itself, we believe that the transformation from the coronavirus experience will have long-lasting impacts for the industry and cities.

In fact, we know from other examples from similar historic events such as SARS, the London underground bombing or 9/11 that demand for public transit will remain below baseline for the mid-term. Past examples also highlight that people shift to more individual modes such as bicycle and cars. Those are longer term behaviour shifts because once someone has purchased a vehicle, they have made a financial commitment for the long term.

We must take these learnings seriously and as a signpost for what is to come during a second, third or fourth wave but also for any future crisis. We should not wait to implement the necessary changes to build a more equitable, sustainable, safe, and reliable mobility network in our cities.

¹ WEF, September 2020, “Around the world, people yearn for significant change rather than a return to a "pre-COVID normal"
Background

On March 11, 2020, the World Health Organization (WHO) declared COVID a pandemic. Their announcement followed months of the coronavirus slowly spreading across the globe and Black Monday - the stock crash on March 9th. In the words of WHO Director-General Dr. Tedros Adhanom Ghebreyesus, "this is not just a public health crisis. It is a crisis that will touch every sector."

Unsurprisingly, that included the personal transportation sector.

With people sheltering at home voluntarily or because of lockdown measures during the early days, utilization of public transit and shared mobility saw a significant downward trend. According to data published by Transit, public transit saw the biggest drop, with ridership declines between 70% to 90% in many markets across the globe.

According to Apple Mobility Trends, transit requests in large European cities like Berlin, Hamburg or Paris moved back to pre-crisis levels (or at least close to) during the summer but dropped again due to the second wave from October onwards.

Simultaneously, micromobility services suspended operations globally, with companies such as Lime pausing service in up to 90% of all global markets. Demand for carsharing, ridehailing and pooling also plunged and pooling was suspended on many platforms. Yet, while transit ridership still remains below baseline, shared mobility operators have started to report V shaped recovery curves and it seems as if there might be a rosier future for the shared mobility ecosystem. In fact, in Europe micromobility has seen an expansion to Tier 2 and Tier 3 cities. In relatively small cities like Ulm (the launch market of the first car2go pilot with around 125,000 citizens), multiple (often 3 or more) scooter sharing services are fighting for users.

Despite the currently high degree of uncertainty with potentially numerous new waves looming over us, the report uses a unique combination of qualitative and quantitative intelligence to expand the knowledge base about the future of shared mobility. It draws on the latest research from across the globe but also aggregates the views of business leaders that have been interviewed in the past 7 months by the Covid19 Shared Mobility Taskforce. We heard from executives, senior operations managers, technology providers and city officials: all of them on the frontlines of decision-making for the future of shared mobility services.

The outcome of this analysis highlights the four most important consumer and industry trends that will influence our mobility landscape for years to come. Incorporating these learnings at a policy level with three simple policy recommendations will support the creation of a more resilient transportation ecosystem: one that provides access to opportunities and reduces our communities’ carbon footprint, while remaining the circulatory system for our economies.

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Analysis

How has consumer behaviour changed?

The restrictions put in place to limit the diffusion and impacts of Covid-19 have had a widespread impact on people’s lives and their mobility patterns. The pandemic has practically proven overnight that our mobility needs and desires can look very different in the future.

**Trend 1: A significant reduction of commuting for the foreseeable future**

People have reduced their overall number of trips in the initial months because of stay-at-home/lock-down measures. But even during the summer months when most countries loosened restrictions, trip volume was down compared to baseline. At the beginning of November, there are fewer work related trips in most countries across the globe, although the percentage drop varies.

That’s because the pandemic has uprooted business as usual and traditional work and educational arrangements have been dismantled.

Mid October, the World Economic Forum released its Future of Jobs Report which indicates that 84% percent of employers are set to rapidly digitize working processes which includes a significant expansion of remote work. In fact, employers estimate that 44% of their workforce can continue to operate remotely.

Similarly educational institutions, whether universities or schools, have started to shift their courses online. Save the Children released a global study of the pandemic impact on children that estimated that 99% of children worldwide - or more than 2.3 billion children - live in one of the 186 countries that have implemented some form of restrictions due to COVID-19.

Because there is significantly less commuting to work or school, trip distribution throughout the day has changed. Interviews with shared mobility operators have confirmed that the demand curve is now distributed more evenly throughout the day. That is great news for reducing congestion and for the general availability of these services.

From an environmental perspective, the overall avoidance of commuting trips is encouraging because it reduces carbon emissions. In fact, avoidance is one of the 4A’s of sustainable urban mobility practices that were developed by Cathy Macharis, Professor at the Vrije Universiteit Brussels and Head of the research group MOBI. Avoidance is the most effective strategy to reduce our transportation-associated carbon footprint. Yet before the pandemic it was almost impossible to convince people not to commute to their workplace or school.

**Trend 2: Health concerns are driving mobility decisions**

It is becoming increasingly obvious that the main driver of change are people’s efforts to reduce their exposure to the virus. Mass transport, which brings people into close proximity with each other, is where some of the most tangible behavioural changes manifest during a crisis.

The results of the Taskforce’s Rebuilding Tomorrow’s Mobility survey show that health concerns have become the primary decision-making factor with 61% of respondents naming it at their 1. Pre-Covid winners such as convenience, speed or cost of a transport mode, have significantly reduced in relative importance.

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*These As are: Awareness, Act and shift, Avoidance, and Anticipation—each A represents a strategy describing behaviour change.*
This reduction of trip volume because of health concerns is not something new: for example, the Severe Acute Respiratory Syndrome (SARS) crisis of 2003 reduced demand for non-essential trips on public transport. In Taipei, there were half as many underground trips during the peak of the SARS epidemic and it took four months for passenger numbers to return pre-crisis levels.

Similarly, it should be no surprise that this lingering unease of infection delays a fast recovery of public transit. The International Association of Public Transit (UITP) recognizes and is trying to combat the fear of infection with their latest policy brief “Public Transport is Covid-safe”. In summary: there is hard evidence that public transit is safe to ride when wearing a mask and vehicles are well ventilated.

Safety and mitigating risk is going to be an important factor for consumers of transit and mobility services going forward. Operators who have a playbook on how to respond to the crisis on a days’, weeks’ and months’ perspective will fare better than those who are thinking about the crisis as a short term problem. New high-tech materials, technology and data driven tools will help them transition into the new way of business.

**Trend 3: Recognition that our transportation systems have disproportionate effects on disadvantaged communities**

The pandemic is an economic wrecking ball, with unforeseen consequences. Both, the WEF and Save the Children reports, point out that the future of work and education has arrived mostly for well off segments of our societies that can afford and have access to the necessary technology. The luxury of work-from-home for instance does not apply to lower wage workers, which consists of a high percentage of women, young workers and people marginalized by poverty and racial discrimination. And since children can’t physically attend schools anymore, economically disadvantaged students have suffered because they often lack access to internet and computers.

This inequality spills over into transportation because a higher share of low-paid workers are in essential services and have to continue to get to work.

“I feel hopeful that this is finally going to be a point where we say, wow, it’s not just doctors who are essential, it’s the person who’s brave enough to go to work and and check me out at the grocery store, it’s the bus driver who’s making sure that the folks who need to get to work do get to work.”

- Tamika Butler Principal tlb Consulting

Being nervous about infection, the purchase of a vehicle may seem like the best solution for the frontline workers and blue-collar workers. But this shift to ownership comes at a big cost: for our communities, the environment as well as the individual. The deposit required to purchase a new or used vehicle, the subsequent maintenance costs, and the long-term costs associated with parking and other costs such as insurance and fuel may come as a burden during a time when unemployment is high and working hours are down.

These population segments are more deeply impacted by the economic contraction and we should be wary that “in the absence of proactive efforts, inequality is likely to be exacerbated by the dual impact of technology and the pandemic recession”.

**Trend 4: Shared mobility has been increasing, creating a silver lining of mobility changes**

In many regions of the world and with the uptake in economic activity since the first wave of lockdowns, public transit ridership is slowly increasing. But as we have seen, it will take time and coordinated communication efforts to educate the public about the safety of public transit and to rebuild trust in public ridership.

For example, in 2005, the London underground trains were the target of a series of bomb attacks,
killing 56 people and injuring another 700. Although the damaged underground lines reopened within weeks, the attacks had longer lasting impacts on the city’s commuting patterns. Londoners avoided underground journeys for months and partly switched to other modes of transport such as cycling. Cycling trips remained high until the end of 2005, with a 9% annual increase in registered trips compared to the previous year, whereas car, bus and underground use decreased.

Unsurprisingly we see similar patterns caused by the current pandemic. There is a shift towards driving a car or bike alone. In April 2020, a survey conducted by CarGurus in the US on their car shopping sentiments found that nearly half of the respondents expected to increase the use of their personal vehicles while nearly over 40% of the respondents intended to purchase a vehicle.

However, there is a silver lining: newer shared modes also have rebounded much faster. Lufthansa’s Innovation Hub released an analysis of active app users for different transportation modes and the last two months show an increase, particularly for bikeshare and carshare compared to pre-Covid.

![Graph showing rebound in different transportation modes](source)

Most shared mobility providers have reported a V-shaped recovery curve in the past months. For example car sharing services like SHARE NOW reported a drop of close to 50% between Q1 and Q2 of 2020, but then rebounding to 75% of Q1 interactions volumes in the third quarter. Similar patterns have been reported by executives of Evo carshare, Modo Co-op or Gig carsharing in North America.

There are obviously a couple of inherent advantages with shared mobility because technology is the backbone of these services. Contactless reservations, easy restriction of access to ensure physical distancing and touchless entry for microtransit are default features. And, shared mobility vehicles are obviously also a lot easier to clean compared to larger buses or trains.

> Technology (in shared mobility) enables dynamic responsiveness to demand and has the capability to help in contact tracing which is a key to ensuring a safer commute.
> - Jacob Grieg (VP-Americas, Liftango)

The new mobility industry has gone through some dramatic changes over the past few months since the advent of the pandemic. The industry experienced four major turns from February-March, beginning with service demand dropping sharply and a majority of city authorities enforcing strict rules that restricted the use of these services.

### How has industry adapted?

**What happened to new mobility services in 4 waves?**

- PANIC
- SAFE AND CLEAN
- SUPPORT AND COLLABORATION
- ADJUSTED BUSINESS

Source: Covid-19 related actions of mobility/transportation service providers, Augustin Friedel
At this time, some micromobility operators closed cities permanently and reduced staff. Though it should be noted that a consolidation in micromobility space was on the horizon before the pandemic and has been predicted by many industry analysts, the pandemic accelerated some of these moves.

Following which, companies gained some clarity in providing ‘quick-fix’ solutions which resulted in increased disinfection and cleaning protocols, while attempting to build confidence among users and the general public. Moving forward from this stage, these mobility companies offered their services to the essential workers, collaborating directly with organizations and hospitals to make best use of their vehicles. Carshare operators reduced or halted operations with some offering services only to essential workers at discounts for free. As of October, this has evolved to a point where several companies have adjusted either their operations to explore new business verticals or pricing models to capture the new needs better. For example public transit providers in Moscow introduced an early bird ticket to ease potential crowding during peak hours.

As the pandemic shifted into the second phase of re-opening operators looked to assure members that using the service was safe. The situation is still very dynamic but shared mobility services are way more optimistic about their future than could have been imagined early in the pandemic.

Trend 1: Acceleration of electrification of transportation, with e-bicycles flying off the shelves

At the end of August 2020, the new vehicle inventory was down in the US, owing to production shutdowns and high demand of new vehicle purchases. According to NADA, vehicles had lower average discounts and spent less time at the dealerships compared to August 2019. Online used car retailer Carvana is expecting to see record sales in their platform in 3rd quarter 2020, following a successful 2nd quarter, with over 55,000 used vehicles sold.

This increase in the number of vehicles on the road is alarming, especially with the need to keep CO2 emissions in check and not add to the polluted air around large urban centres. Electric vehicles are key to keeping emissions low and in order to address this concern, California along with several European countries (eg. UK) has begun its march towards a zero emissions future, by introducing a ban of new gasoline powered vehicles starting 2035. This is the first official ban from any state in the US, compared to Europe which has seen similar bans over the last few years.

France, Italy, Germany and Spain also announced increased EV incentives, in some cases contributing nearly half the vehicle’s cost. Clearly taking the push towards zero emission vehicles seriously helps adoption. In the first three quarters of 2020 people in Europe have bought over 290,000 battery electric vehicles and 279,000 plug-in electric vehicles, compared to the 169,000 and 87,000 vehicles they bought in 2019. The total alternative fuel vehicle market has increased significantly compared to 2019, with almost 1 million vehicles being sold in the first two quarters, increasing 20% over 2019.

However, despite being greener modes of transport, the increase in vehicle sales is still expected to cause increased congestion within urban areas and create increased gridlock so electrification cannot be only focused on cars. Dutch cycle maker Vanmoof sparked a controversy around their commercial depicting bicycles as an alternative to gridlocked roads and highways, while tagging it the future of mobility. Despite being banned in France, this ad showed the potential for active transportation as the future of commuting, and the effects of e-bikes’ popularity in the recent months.

The demand for bicycles has been higher than it has ever been, making it very hard to purchase a bicycle, obtain spare parts or get it repaired. In North America, bike shops have sold out of their inventory, and US and Canada are facing a bike shortage, as the fear of public transport and need for an active lifestyle has kicked in following the travel restrictions and work-from-home situation.

US based Trek has noted a spike in sales in April following the lockdown and announced plans for the company to keep up with demand and restore the disrupted supply chain. France-based Arcade Cycles is ramping up production to meet with its rental bike demand, with over 80% of its business coming from the Business-to-Government industry, working with over 200 cities in 29 countries.
Giant, the world’s largest bike manufacturer, is expected to produce over 300,000 bikes next year through its new plant in Hungary, with e-bikes being added to its plant by 2021.

Countries have placed zero emission vehicle mandates on the commercial sector too which includes transit. Globally there has been a fresh influx of capital support from governments to not just boost commercial vehicle fleets but also to improve charging infrastructure (in case of electric vehicles).

COVID has caused governments to think about how they want to rebuild their economies. They are coming to the conclusion of a green future, with green and clean technologies across all industries – much faster and sooner than we expected.

- Josipa Petrunic President of CUTRIC

Covid has given transit agencies the mental and operational space to think of new technologies, such as contactless usage, telemetry, automation etc. They have also been thinking about electrification more robustly over the last few months. With less procurement needed for diesel and hybrid buses at the moment, agencies are able to balance out their needs with more fully electric vehicles within their fleets.

Trend 2: Subscription and long-term access to share vehicles gaining traction

Even with electric vehicles trending, it is still quite capital intensive to buy or lease an electric car. EVs and new e-bikes, whether they are imported from China and Taiwan or are manufactured in North America or Europe, come at a significantly higher cost when compared to standard bikes. Added to that a high level of demand which drives up cost even more.

So it is no surprise that subscription services and long-term access schemes are on the rise, catering to the market that would like a cheaper alternative to owning a car, as well as, people who want to try out an electric vehicle or bike.

Australian energy service provider AGL has taken interest in the EV popularity and partnered with Carbar to provide an affordable EV subscription service to allow people to test the waters in the EV market. Companies such as Envoy and Borrow based in North America are also looking at capitalizing the new EV user market, allowing people to choose from a long list of EVs ranging from basic to premium offerings.

Onto (formerly Evezy) EV subscription service in the UK moved to a standardized home delivery, swap and collection services for all its users, in order to reduce risk and ensure the vehicles are safe for use. Onto increased the size of its fleet from 180 to 1300 cars three months ago to capitalize on the popularity of EVs in the UK. In Germany, WeShare (Volkswagen carsharing scheme) launched WeDrive subscription service as an additional offering, by converting some of their electric vehicles for longer use cases.

Micromobility providers also have seen an increase in length of rides. According to a June survey by Lime, people in American cities are more likely to try riding an e-scooter now than before the coronavirus. Among regular riders, journeys are an average of 35% longer – up from 9.72 minutes pre-COVID to 13.1 minutes.

This new trend paves the way for micromobility and specifically e-bike subscription services. Gaining popularity following the pandemic, their demand has been growing every month. Services such as Brompton, Swapfiets and Zygg have popped up in the bike subscription scene joining the start ups such as Buzzbike and Hurricane who have seen increased interest in their service. By removing the upfront cost, more people have access to bikes which are expected to help them cover basic errands and commutes located within about 11.5km of their neighbourhoods.

Trend 3: Merging of personal mobility with delivery

While personal mobility demand plummeted during the pandemic, delivery was up across all markets. Naturally, moving into the delivery business was one of the key opportunities for mobility services across markets and verticals.

As people were staying at home and shops and restaurants closed, the demand for “quick-commerce” increased. The ridehailing business
collapsed by 70% and more, and drivers faced a very challenging situation with steady costs but very limited revenue. A move into delivery was seen as a solution for both sides of the marketplaces — consumers have more choice to fulfill their delivery needs and drivers get the opportunity to improve their economic situation.

In order to overcome the loss in ridership in North America, Lyft and Uber have connected with grocery stores, pharmacies and other retail locations to provide delivery services. Uber launched two services - Uber Connect and Uber Direct to allow shoppers to place orders from select retailers and get these items delivered without contact, as well as use these services to send family and other people packages without contact. While Lyft used this as an opportunity to enter the meat and grocery delivery service market. As of August 2020, Uber Eat’s generated more revenue than their ridehailing service, indicating that delivery business is compensating for the loss in ridership since the beginning of the pandemic. In Asia, providers such as Grab and Careem have also entered in the ‘contactless deliveries’ market, by delivering essentials, food and medicine supplies around their major markets.

Shared moped and scooter delivery operators have also partnered with delivery companies to give them access to alternative vehicle fleets in order to deliver food and goods. Revel, based out of the USA, allowed restaurants in major cities to take their mopeds on a monthly basis for free for food delivery. In Sweden, Voi partnered with Gigstr to launch Voi It!, to help restaurants and retail stores by giving them access to service professionals and e-scooters to respond to the increasing demand for home deliveries. Time will tell if these marketing stints will grow into a substantial business.

**Trend 4: Creation of the building blocks for the resilient transportation network of the future: Shared Mobility & MaaS**

Micromobility - bikeshare, scootershare and moped share - in particular have shown resilience in the face of adversity. They initially suffered reduction in ridership which led to many companies removing vehicles from the streets and suspending their services. With a reduced fleet size, utilization has increased which, specifically for micromobility, has translated into strong growth. Lime is among the e-scooter companies that was able to capitalize on the work-from-home population. In fact, Lime’s CEO is positive that his company will report a profit in 2021.

Part of that success has to do with an increase of safe infrastructure: Cities have installed pop-up bike lanes to keep up with the growing bike ridership numbers that were triggered by the pandemic. The lack of cars and congestion in the initial days of the pandemic helped city planners to move public space from cars to bicycles and green modes of transportation. According to BBC, over $1.1 billion has been spent developing over 2,300 km of bike lanes and cycle-related infrastructure.

After reopening post lockdown, a few cities have decided to make these temporary bike lanes permanent in an attempt to reduce congestion and pollution while encouraging people to continue this trend. Paris has announced that they would make all the temporary 50+ kilometres of cycle lanes permanent, beyond the pandemic, only allowing taxis, buses and some other vehicle categories to drive on these lanes.

Another good example of resilience is microtransit, most notably in Minneapolis. The shutdown following the recent BLM (Black Lives Matter) unrest, saw a sharp decline in mass transit ridership. Yet microtransit services continued to rise, helping people connect to underserved regions of the city. Since January 2020, Minneapolis-based microtransit services have served more people in transit deserts than in transit dependent areas, indicating the need for an on-demand based transportation solution.
The share of trips in transit-dependent suburbs of Minneapolis increased during the pandemic

Proportion of all microtransit trips starting or ending in transit-dependent neighborhoods since January 2020

Source: Spare Labs (Link)

Cities such as Madrid or Lithuania have also started a “cash-for-clunkers” program where citizens can swap their old vehicle for mobility budget that can be for any type of shared mobility or transit passes.

Service providers such as Lime are integrating third party service providers to their platform, increasing the number of transit options for their users and in turn indicating the need for “multimodal” transit. This integration is expected to boost demand for these smaller service providers by leveraging the user base of the larger, more established companies.

“This is the perfect time to start thinking about ideas like this, because we can really reshape how public transportation works.”

- Kristoffer Vik Hansen, CEO, Spare Labs

Cities should capitalize on this huge opportunity and encourage a comprehensive MaaS ecosystem, where shared mobility service providers and mass transit operators are combined. The consolidation of all individual mobility operators in a region is likely to make the whole transit network more resilient, allowing users to rely on these mobility options for all their needs.

An example of how MaaS contributed to high demand among individual operators has been quite evident during the pandemic in Europe. MaaS provider Whim noted around 1500 people responded immediately to the pandemic crisis and shifted from public transit to micromobility focused options in order to continue commuting. Similarly, Trafi, has seen bike sharing, e-moped and e-scooters see higher demand as the weeks progressed during the pandemic, increasing 6%, 4% and 16% in ridership in 20 weeks. While it’s to be seen if these increases reflect the warmer weather in Berlin or an actual behaviour change, these trends are promising for the shared mobility industry overall.

Source: Trafi, BVG, Porsche Consulting-data is based on Jelbi user behavior

Conclusion: Now is the time to adjust our policies

The beginning of the COVID-19 pandemic sent government, individuals and corporations into panic. As the world shut down so did many of the shared mobility providers in an effort of doing their part and encouraging people to stay home. The summer months saw an easing of the restriction but also showed what people’s mobility behaviour might look like for the foreseeable future.

For cities there are two trends that pose a serious challenge from the Covid-19 pandemic: the reduction in transit riders because of health concerns and an increase in private car ownership. The move to private car ownership poses a significant challenge for public policy planners who have been working to reduce the use of private vehicles.

An increase in private vehicles has a long-term impact; for example the average Canadian owns a car for 9 years and increases GHG emission, congestion, and stress on parking infrastructure.

The pandemic has already shifted policy for many cities: Recognizing the negative effects of increased car ownership, cities such as New York, Chicago and Seattle moved quickly to start micromobility pilots. Many more jurisdictions are moving to adopt policies that bring more shared mobility options to their cities in an effort to give residents a safe, reliable way to move around the city with the aim to curb private car ownership.

The adoption of shared mobility is an effective way to reduce the threat of increased private vehicle ownership. We recommend implementing three policies that would build resilience into cities’ transportation systems so they can continue to provide access to services for residents throughout this pandemic but also when the next crisis hits.

Policy Recommendation 1: Ensure shared mobility is seen as an Essential Service.

The pandemic posed a very hard question for cities. How do residents get around if they have lost confidence in the safety of public transit? How do essential service workers get to work if they have lost confidence in the safety of public transit? Shared mobility operators saw an opportunity to be part of the solution. Many operators offered free rides or deep discounts to essential service and health care workers. Some cities helped through subsidies, mostly by waiving various fees charged to operators. These initiatives highlight the changing view of shared mobility. When faced with the new reality, cities saw that shared mobility was a viable alternative. People perceived it as a safer, convenient and reliable way to move about the city and was a much-needed solution for cities.

During the first wave and the resulting lockdowns some cities across North America officially recognized shared mobility such as bike share, carshare and micromobility as essential services. Other cities took a more passive approach: while not officially recognizing them, they also did not mandate operators to shut down. This is a milestone moment for shared mobility as prior to the pandemic many cities did not see shared mobility as essential to the transportation solutions of their cities. City planners viewed much of shared mobility with some doubts as to how positive an impact they could have on their city.

This change in view on shared mobility is evident across the globe. Cities that had been slow or previously rejected some forms of shared mobility moved quickly to launch pilots and bring in operators. The biggest benefactor of this new view was micromobility. Seattle, New York and San Francisco launched or expanded on pilots in the early summer. In the case of Seattle and New York pilots for micromobility had been rejected by elected officials within the past year only to reverse these decisions due to the pandemic. Similarly, the
UK planned to release micro mobility regulation originally in mid 2021 but then the plan was fast tracked by COVID-19. The regulatory framework for shared e-scooters was released during the summer months and as of now first permits are already issued to operators and the deployments of scooters are increasing week over week.

**Policy Recommendation 2: Create a policy framework that supports financially viable operations**

While the change in city planners view on shared mobility is welcome more must be done. As shared mobility services and the number of operators expanded over the past few years, so have regulations. Regulations have an important role to play in ensuring a level playing field for operators and the effective use of the public domain. In the last two years city planners have increased regulation on all operators significantly, carshare, micromobility and ridehailing/TNC have seen a large share of increased regulation. There is no better example of this than micromobility, the latest entrant into the shared mobility market, which has experienced some of the most restrictive regulations of any provider.

To understand why, you must look at the history of shared mobility. In the past, too many operators took an “act now, ask for permission later” approach, and many did not consult with cities and took advantage of either a lack of regulation or loose regulations to launch. This was the case with bike share in many European cities that seemingly overnight would launch with thousands of bikes scattered on the sidewalks. While in North America, ridehailing’s aggressive approach to launching without working with cities also caused concern with city planners. With city planners on high alert to new mobility solutions launching in their cities there was bound to be a push back. City planners moved quickly to regulate micromobility in particular and every city seemed to come up with a new and different regulatory framework. Micromobility providers could not act like some of its predecessors and were forced to engage with cities. The promise of mass expansion to investors combined with multiple operators competing for access to cities pushed micromobility providers to accept some of the most restrictive regulation of any shared mobility service.

One of the most striking examples of comprehensive restrictive regulation was Portland. In a lengthy 26 page Administrative Rule, Portland regulations stretched into every possible area of operating a shared mobility service which makes it extremely difficult to create a viable operation.

Other forms of shared mobility struggled with regulation as well. Carshare operators pay the highest fees of all shared mobility operators as many cities charge permit fees in addition to standard rates for street parking. Additionally carshare pays a large portion of the parking violation and towing costs that it cannot collect from its members. This combined with the high equipment cost makes it very difficult to provide an attractive price for end users and expansion of the service. Cities should look at discounts on parking fees for carshare providers considering the net revenue impact of carshare providers fees has no impact on the overall revenue collected by the city.

One of the most difficult restrictions for all shared mobility is fleet size. Shared mobility success comes from convenience and availability. As membership grows, the ability to have equipment located near its members is the most important aspect to the success of the service. Ridehailing success is largely predicated on its promise to users that a car will pick them up within five minutes, as well as their ability to show the car approaching the rider’s location. For other forms of shared mobility the equipment needs to be within a short walk of the user’s location, so any constraints on fleet size limits a key factor for success. Cities have put up mainly arbitrary limits on fleet size as they struggle to determine how much equipment is enough. City planners should take a more collaborative approach, working with the provider and using metrics such as number of units per square kilometer to set up initial fleet size restrictions.
As the pilot ends city planners should look at scalable fleet size limits based on membership size and availability in key locations at certain times of the day.

Another issue with city by city regulations is the differences of each city’s regulatory policies towards shared mobility. The varying regulations have a significant negative impact on operators’ abilities to be successful and profitable. The burden of having unique regulations in each city increases the cost of operations and it also creates huge issues with customer education and proper use of service. Shared mobility could benefit greatly from a universal regulatory approach for each segment. This would allow for reduced development and operations costs as operators could centralize certain aspects of their operations and not be constantly developing their software to meet various and changing regulations from city to city.

Finally, cities should ensure there is an equitable fee structure between the various forms of shared mobility. How cities currently price access to the lane, curb and sidewalk varies greatly and gives advantages to one form of shared mobility over the other. In many cities there does not appear to be a cohesive and holistic approach to the fee structure, which creates inequity between each service and allows for a competitive advantage. Currently many of the fees are simply passed on the end user in the form of a fee added on to the end of the bill. All of the fees drive up the total cost to the end user which imbalances the user base towards affluent working class professionals. Cities should ensure that the fee structure for each shared mobility service is fair and equitable and if one form of shared mobility is preferred over another by city planners there should be a logical explanation for the difference.

In an effort to provide mobility solutions that are safe and convenient for essential workers and residents that cannot afford a private vehicle, city officials looked to shared mobility as a solution.

In late spring several cities changed regulation on shared mobility operators and launched partnership programs with operators.

“A focus of Queensland is how to balance public transportation, with shared mobility and private car ownership to create a well-rounded transportation eco-system.

- Ishra Baksh, Executive Director (MaaS), Department of Transport & Main Roads

Spin’s partnership programs in Portland, Kansas City and Charlotte are good examples of partnerships between the city and micromobility. In these cases, the city reduced the fees and restrictions on fleet size and the operators reduced the per minute charge and increased their fleet size to better serve their customers. In Kansas City, the reduction of $1 per unit per day fee allowed Spin to increase the fleet size, which in turn provided more availability of e-scooters in communities below the federal poverty line. Spin reports that trips have increased 146% in these areas compared to last year and trips are 35% longer signalling a possible change in the mode displacement for which e-scooters traditionally have been used for.

Finally in Portland, the city waived fees and allowed Spin to increase its fleet - which led to a 46% increase in ridership, with a 137% increase in East Portland, an underserved area that is a priority for the City. These programs show a relatively low commitment from the city, simply waiving fees and restrictions, which would not be considered to have any bottom line impact on a city’s budget, but which resulted in positive outcomes for both the operator and the city.

Transportation Network Companies (TNC) partnerships with transit agencies have helped provide subsidized rides that replace transit routes that have seen between 75% - 90% reductions in ridership. Miami-Dade County, Indianapolis, Indiana; Livermore, California; Des Moines, Iowa; Central Midlands, and South Carolina have either started a voucher program or are in discussions with TNC’s. Miami Dade Transit

Policy Recommendation 3: Invest in partnerships with shared mobility operators

Regulators have been hesitant to form partnerships with shared mobility operators, reluctant to be seen using tax revenues to subsidize private for-profit companies on transportation solutions. The threat of increased private car ownership combined with the perceived safety concerns of residents towards public transit is shifting views of shared mobility.
partnered with Uber and Lyft during the first wave of the pandemic to help with first and last mile transportation to transit. The City of Miami issued a $45 voucher that essential workers could use for 2 trips a night with Uber and Lyft between 12am and 5am up to ¼ mile away from prescribed transit stops in Miami Dade County.

Source: Miami Dade Transit, Miami, US

This partnership brought some revenue to the TNC’s but helped reduce transit operating costs and helped manage issues with staff shortages for the transit operator. Many believe that these partnerships will go on after the pandemic ends as a cost-efficient way to offer transit service. It should be noted that using TNCs to operate inefficient and or costly transit routes was occurring prior to the pandemic and the pandemic may have acted to accelerate planning and implementation of some of these partnerships.

We strongly believe that cities should take the learnings of the initial months of the pandemic seriously and as a signpost for what is to come during a second, third or fourth wave but also for any future crisis. They should not wait to implement the necessary changes to integrate shared mobility with their existing public transit system better. Doing so will create a more resilient transportation ecosystem that is truly the antidote to car ownership.
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Covid19 Shared Mobility Taskforce: Chaired by Sandra Phillips, the global Covid-19 Shared Mobility Taskforce, is composed of shared mobility experts who have hands-on experience in technology and operations, policy and government relationships, as well as legal and insurance issues of carsharing, micromobility and microtransit. Our objective has been to provide assistance by sharing knowledge, data and best practices during the current crisis and the recovery phase.

movmi: movmi is an award winning, WBE Canada certified (Women Only Business Certification) boutique agency specialised in Shared Mobility Architecture: the planning, implementation and launch of new shared mobility services such as carsharing, micromobility or Mobility-as-Service. Our services span research, analysis & business case modelling, and the co-creation of new shared mobility services. Our team has deep expertise in all aspects of shared mobility architecture and operations and to date we have been involved in over 60 shared mobility projects worldwide. If you want to learn more about movmi’s work, please contact us at info@movmi.net.